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# THE BEAN BAG

**A newsletter to promote communication among research scientists concerned with the systematics of the Leguminosae/Fabaceae**

Number 37

May 1993



## From the Editors

Joseph H. Kirkbride, Jr. and John H. Wiersema

The *Bean Bag* (BB) is designed to promote communication among research scientists concerned with legume systematics. To achieve this goal the BB is issued in May and November of each year and features six columns: From the Editors, News (meetings, major events, announcements, etc.), Latin American Legume Report, Nodulation and Nitrogen Fixation (new nodulation records), New Readers, Gleanings, and Recent Legume Literature. Data in the Gleanings column are derived from questionnaire sheets which Readers complete and return. If you have news about legume systematics, send it to us for this column. The Recent Legume Literature column contains published research papers of specific interest to BB Readers. Recent is defined as one year old. We rarely will publish a citation that is more than one year old. Specific interest to BB Readers is defined as research papers of interest to a worldwide group of legume systematic botanists. We encourage BB Readers to send us notices, observations, etc.

Diacritical marks can now be placed in the BB. If such marks should be placed in your name, address, publications, etc., please let us know. We are especially interested in correcting our Directory.

Electronic copies of the BB and the *Directory* can be obtained from TAXACOM or through Internet at HUH.HARVARD.EDU. TAXACOM is a free online service for biosystematics and biogeography at the Buffalo Museum of Science, Buffalo, New York, USA. The system operator is Dr. Richard H. Zander. TAXACOM is available 24 hours daily at telephone number 716-896-7581 using 2400/1200/300 bps, 8 data bits, 1 bit stop, and no parity. Outside of the USA use CCITT at 2400 bps, otherwise use Bell protocols. HUH.HARVARD.EDU is a free service on Internet maintained by Dr. James Beach at the Harvard University Herbaria, Cambridge, Massachusetts, USA. Connect to HUH.HARVARD.EDU via FTP using the name FTP and the password FTP, and copies of the BB and the *Directory* are in the subdirectory /PUB/NEWSLETTERS/BEANBAG.

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## The Rupert Barneby Award

The New York Botanical Garden is pleased to announce that Mr. David Clarke of the University of Illinois, Urbana, is the recipient of the 1992 *Rupert Barneby Award*. Mr. Clarke will use the award to complete a taxonomic treatment of *Acacia* series *Gummiferae* of the Caribbean, both as part of his graduate thesis and as a contribution to the *Flora of the Greater Antilles*.

The New York Botanical Garden also invites applications for the 1993 *Rupert Barneby Award*. The award of \$1,000.00 is to assist researchers planning to come to the New York Botanical Garden to study the rich collection of Leguminosae. Anyone interested in applying for the award should submit their curriculum vitae, a letter describing the project for which the award is sought, and how the collection at NYBG will benefit their research. Travel to NYBG should be planned between January 1, 1994 and January 31, 1995. The letter should be addressed to Dr. Enrique Forero, Director, Institute of Systematic Botany, The New York Botanical Garden, Bronx, New York 10458-5126 USA, and received no later than December 3, 1993. Announcement of the recipient will be made by December 17, 1993. Anyone interested in making a contribution to *The Rupert Barneby Fund in Legume Systematics*, which supports this award, may send their check, payable to The New York Botanical Garden, to Dr. Forero.

## International LOTUS Symposium

22-24 March 1994

P.R. Beuselinck

An International Lotus Symposium is being organized to discuss the many facets of *Lotus* research. Arrangements have been made to hold this symposium at the Missouri Botanical Garden in St. Louis, Missouri. Meeting dates are 22-24 March 1994. The *Lotus* Symposium is co-sponsored by the Missouri Botanical Society, the University of Missouri, and the Agricultural Research Service-USDA.

The main objective of the *Lotus* Symposium will be to cover the many aspects of this genus, including breeding, genetics, taxonomy, management, utilization, and physiology, from applied agronomy to genetic manipulation. The secondary objective is to publish the proceedings in a manner so that they can be used as the standard reference for *Lotus*. Plenary speakers are planned, and voluntary papers are encouraged.

Further information can be obtained by contacting P.R. Beuselinck, Plant Genetic Research Unit, University of Missouri, 207 Waters Hall, Columbia, Missouri 65211, USA, or by FAX 314-882-1467 or E-Mail AGROBELL@MIZZOU1.MISSOURI.EDU (Internet).

## Legume Botany in the Former USSR

Yuri Roskov

Botany made significant progress in the former USSR. There are departments of Botany in each University, Pedagogical, and Medical Institute (College). The centers of basic botanical research are institutes associated with Academies of Sciences in almost all of the Republics. Usually they are located in the capital cities. Besides these, applied botany was developed by the Russian Agricultural Academy. Its main center is the Vavilov Institute of Plant Industry (WIR), St.-Petersburg.

The most important centers of botany are: Komarov Botanical Institute, St.-Petersburg; Department of Higher Plants of the Moscow State University, Moscow; The Main Botanical Garden, Moscow; The Central Siberian Botanical Garden, Novosibirsk; Biology & Soil Institute and Far East Botanical Garden, Vladivostok; Ukrainian Institute of Botany, Kiev; Georgian Institute of Botany, Tbilisi; Armenian Institute of Botany, Erevan; and, Azerbajdzhan Institute of Botany, Baku.

### Major Floristic Works Containing Information on Leguminosae

The first complete account of legumes was made in the *Flora URSS* (1945, 1946, 1948), principal editor V.L. Komarov. Moscow, Leningrad. In Russ.:

Vol. 11 ([1941] reprinted 1945), vol. editor B.K. Schischkin: subfams. Mimosoideae and Caesalpinoideae, tribes Amorpheae, Galegeae (in part), Genisteae, Loteae, Lupineae, Sophoreae, Thermopsideae, and Trifolieae;

Vol. 12 (1946), vol. editor B.K. Schischkin: genus *Astragalus*;

Vol. 13 (1948), vol. editors B.K. Schischkin & E.G. Bobrov: genus *Oxytropis*, tribes Cicereae, Coronilleae, Desmodieae, and Hedysareae.

English translation: *Flora of the USSR* Vols. 11 (1971), 12 (1965), 13 (1972). Jerusalem: Israel Program for Scientific Translations.

The *Flora URSS* was prepared by a number of famous Soviet taxonomists, mainly staff members of the Komarov Botanical Institute, and contains original treatments of legume taxa. Work on the *Flora URSS* was accompanied by the publication of monographs for some taxa of Leguminosae. New legume taxa published after the *Flora URSS* were included in *Additamenta et Corrigenda ad "Floram URSS"* by S.K. Czerepanov (1973, Leningrad, p. 240-283, 605-612). A complete list of former-USSR species was presented in *Plantae Vasculares URSS* by Czerepanov (1981, Leningrad, p. 217-249), and in a new edition in press in the USA.

Publication of *Flora URSS* was followed by a number of floristic projects for the USSR Republics. Their authors generally accepted the systems of classification and species delimitations of *Flora URSS* and structured their works as traditional floristic revisions.

*Eesti NSV floora* Vol. 3. (1959) K. Eichwald et al. Tallinn. In Est.

*Latvijas PSR flora* Vol. 3. (1957), editor P. Galenieks. Riga. In Latv.

*Lietuvos TSR Flora* Vol. 4. (1971), editor M.P. Natkevicaite-Ivanauskiene. Vilnius. In Lit.

*Flora BSSR* [Belorussia] Vol. 3. (1954), vol. editor M.P. Tomin. Minsk. In Russ.

*Flora URSR* [Ukraine] Vol. 6. (1954), editor D.K. Zerov. Kiev. In Ukr.

*Opredelitel Vysshikh Rastenij Moldavskoj SSR* [Key to the higher plants of Moldavia], 3rd ed., by T.S. Geideman. 1986. Kishinev. In Russ.

*Flora Georgiae* 2nd ed. Vol. 7. (1981), vol. editors L. Chinhidze, Sch. Kuthatheladze, I. Latschaschvili. Tbilisi. In Georg.

*Flora Abkhazii* 2nd ed. by A.A. Kolakovskiy. 1985. Vol. 3. Tbilisi. In Russ.

*Flora Armenii* Vol. 4. (1962), editor A.L. Takhtajan. Jerevan. In Russ.

*Flora Azerbajdzhana* Vol. 5. (1954), editor I.I. Karjagin. Baku. In Russ.

*Flora Kazakhstana* Vol. 5. (1961), editor N.N. Pavlov. Alma-Ata. In Russ.

*Flora Uzbekistanica* Vol. 3. (1955), editors E. Korovin, A. Vvedensky. Taschkent. In Russ.

*Flora Turkmenii* Vol. 4. (1949), editors B. Fedtschenko, M. Popov, B. Schischkin. Ashkhabad. In Russ.

*Flora Kirgizskoi SSR* Vol. 7. (1957), editors B. Schischkin, A. Vvedensky. Frunze. In Russ.

*Flora Tadzhikskoi SSR* 2nd ed., Vol. 5. (1978), editor P.N. Ovchinnikov. Moscow, Leningrad. In Russ.

*Flora Srednei Sibiri* [Flora of Middle Siberia] by M.G. Popov. 1957. Vol. 1. Moscow, Leningrad. In Russ.

*Flora Sibiriae Centralis* Vol. 2. (1979), editors L. Malyshev, G. Peschkova. Novosibirsk. In Russ.

After the Republic *Floras* a number of major projects for large regions of the former-USSR were undertaken. These monographs contained critical revisions with new systems of classification, detailed synonymies, and large numbers of new taxa.

1. *Flora Partis Europaeae URSS* Vol. 6. (1987), vol. editor N.N. Tzvelev. Leningrad. In Russ. [Russia in Europe, Estonia, Latvia, Lithuania, Belorussia, Ukraine, and Moldavia]. Fabaceae: a team of authors. Species distributions were given in floristic regions.

2. *Flora Kavkaza* by A.A. Grossheim. 1955. Vol. 5. Moscow, Leningrad. In Russ. [Russia in Caucasus, Georgia, Armenia, and Azerbajdzhan]. Species distributions were illustrated by maps.

3. *Conspectus Floraes Asiae Mediae* Vol. 6. (1981) R. Kamelin, S. Kovalevskaja, and M. Nabiev. Taschkent. In Russ. [Kazakhstan (except northern parts), Uzbekistan, Turkmenistan, Kirgizstan, and Tadzhikistan]. Leguminosae: a team of authors. Species distributions were given in floristic regions; a great number of toponyms were used without any directory or map.

4. *Flora Sibiriae* (In press, probably 1994), vol. editor A.V. Polozhij. Novosibirsk. In Russ. [Siberian Russia]. Fabaceae: a team of authors. Species distributions will be illustrated by maps.

5. *Plantae Vasculares Orientis Extremi Sovietici* Vol. 4. (1989), editor S.S. Charkevich. Leningrad. In Russ. [Far Eastern Russia]. Fabaceae: N.S. Pavlova. Species distribution were illustrated by maps.

6. *Flora Arctica URSS* Vol. 9. (1986), editor B.A. Jurtzev. Leningrad. In Russ. [Russian Arctica]. Leguminosae: a team of authors. Species distribution were illustrated by maps.

A review of modern Leguminosae systems of classification were contained in a monograph *Bobovye Zemnogo Shara* [Legumes of the Earth] by G.P. Yakovlev, 1991, Leningrad (In Russ.). Data on chromosome numbers of former-USSR legumes can be found in *Numeri chromosomatum Magnoliophytorum Floraes URSS* Vol. 1 (1990), editor A. Takhtajan, Leningrad. Data on human utilization and chemical substances of legumes were published in *Rastitelnye Resursy SSSR. Hydrangeaceae-Holotragaceae*. [Plant resources of the USSR. Vol. 4.] (1987), editor P.D. Sokolov, Leningrad (In Russ.).

## Wanted Faboid Seeds and Fruits: I

Charles R. Gunn

This past year I have completed descriptions of the seeds and fruits of about 175 faboid genera, and concurrently the plates for these genera have been completed. This constitutes the start of the third of three volumes treating legume seed-fruit morphology; volumes 1 and 2 have been published. The genera used in volume 3 are based on the list published in USDA/ARS Tech. Bull. Number 1796. The seeds and fruit of the following genera cannot be included in this study, because I have been unable to locate their seeds and fruits or their published illustrations. Because of excellent cooperation, especially (P), this list is shorter than it was a month ago.

Please loan or send me (U.S.National Seed Herbarium, Room 304, Bldg. 011A, BARC-WEST, Beltsville, Maryland 20705-2350, USA) seeds and fruits or seed-fruit illustration citations of these genera:

### Tribe: CROTALARIEAE

*Sellocharis paradoxa*. S.E. Brazil. 1 sp.

### Tribe: DESMODIEAE

*Desmodiastrum belgaumense* (*parviflorus*) & *racemosum* (*rotundifolius*). 2 spp. India, Indochina, Indonesia.

*Neocollettia wallichii* (Kurz) Schindler (*Teramnus w.* & *N. gracilis*). 1 sp. Burma & Java.

*Nephrodesmus sericeus*, *N. macrobotrysos*, *N. parvifolius*, etc. 6 spp. New Caledonia.

### Tribe: GALEGEAE

*Spongiocarpella grubovii*, *intermedia*, *nubigena*, *paucifoliolata*, *polystichoides*, *potaninii*, *purpurea*, *spinosa*, *ynnanensis*. (*Astragalus* *nub.*; *Chesneya* *nub.* & *C. poly.*; *Oxytropis* *grub.*) 9 spp. Russia & Nepal.

### Tribe: HEDYSAREAE

*Sartoria hedysaroides* Boiss. & Heldg. 1 sp. S. Turkey. [Seeds and fruits unknown to science.]

### Tribe: LIPARIEAE

*Xiphotheca* A 1993 segregate genus of *Priestleya*. South Africa.

### Tribe: LOTEAE

*Tripodion* Recent segregate genus of *Anthyllis*.

### Tribe: MILLETTIEAE

*Burkilliodendron album* (*Alloburkillia* & *Burkillia* a.). 1 sp. Malaysia (Perak).

*Imbralyx albiflora* (Prain) Geesink (*Millettia* a.) & (*Millettia* Sect. *Albiflorae*). 4 spp. South

China, Malaysia, Sumatra.

*Margaritolobium luteum*. 1 sp. Venezuela [Margarita Island].

*Muellera moniliformis* (*Lonchocarpus* Sect. *Punctati*). 2-4 spp. Tropical America.

*Neodunnia atrocyanea*, *N. aurea*, *N. longiracemosa*. 5 spp. Madagascar.

*Ostryocarpus* 2-4 spp. Tropical Africa to SE Asia & Indochina.

*Padbruggea filipes* (*Afgekia* f., *Adinobotrys* f.). ca. 10 spp. SE Asia.

*Paraderris cuneifolia* (*Derris* c. & *malaccensis*). India to New Guinea (but not Australia & Pacific).

*Paratephrosia lanata* (Benth.) Domin (*Tephrosia* l.) 1 sp. Central Australia.

*Pongamiopsis amygdalina* (*Millettia* a.) & *P. pervilleana* (*Diphaca* p.). 2 spp. Madagascar.

*Xeroderris chevalieri* (*Ostryocarpus* c.) & (*X. stuhlmanii*). 1 or 2 spp. Tropical Africa.

Tribe: MIRBELIEAE

*Jansonia formosa* Kippist. 1 spp. Western Australia.

*Leptosema aculeatum*, *anomalum*, *bossiaeoides*, *chambersii*, *daviesioides*, *uniflorum* (a segregate genus of *Brachysema*). 6 spp. Western and Northern Territory, Australia.

Tribe: PHASEOLEAE: Cajaninae

*Carrissoa angolensis* 1 sp. Angola. [Little known genus, probably based on a species of *Eriosema*, whose seeds and fruit are apparently unknown to science].

Tribe: PHASEOLEAE: Clitoriinae

*Clitoria mollis*. 1 sp. Sudan & Zaire.

Tribe: PHASEOLEAE: Diocleinae

*Cleobulia leiantha* & *C. diocleoides*. 2 spp. Brazil.

*Luzonia purpurea* Elmer. 1 sp. Philippines [Luzon]. Type description notes that fruit unknown.

Tribe: PHASEOLEAE: Erythrininae

*Cochlianthus gracilis*, *montanus* (*Mucuna* m.). 2 spp. Himalayas. [Possibly congeneric with *Apios*].

*Meizotropis minor*, *pellita* 2 spp. India, SE Asia. Burma.

Tribe: PSORALEEAE

*Hallia alata*, *asarina*, *cordata*, *flaccida*, *imbricata*, *virgata*. 6 spp. South Africa.

Tribe: SOPHOREAE

*Luetzelburgia* 6 spp. Brazil.

## Yucatanensis Etnoflora

José Salvador Flores Guido

*Yucatanensis Etnoflora* is published by the Faculty of Veterinary Medicine and Animal Science of the Autonomous University of Yucatan. It appears periodically as separate fascicles of which numbers one through seven have been published to date. The main objective of this publication is to expand our knowledge of the taxonomy, floristics, ecology, use, and management of plants by the inhabitants of the Mayan communities on the Yucatan Peninsula. It was started at the National Institute and then transferred to the Autonomous University of Yucatan in 1988. For further information, please contact FLORES GUIDO (New Reader).

### Fascicles

1. *Yucatanensis Etnoflora*: Floristic List and Mayan Synonymy.
2. *Yucatanensis Etnoflora*: Forest Use and Management at the Mayan Community of Xul in the Southern Yucatan.
3. *Yucatanensis Etnoflora*: Vegetation types of the Yucatan Peninsula.
4. *Yucatanensis Etnoflora*: Vegetation of the Yucatan Peninsula Islands: Floristics, Ecology, and Ethnobotany.
5. *Yucatanensis Etnoflora*: Glossary of Mayan Agricultural Terms.
6. *Yucatanensis Etnoflora*: Gymnospermae of the Yucatan Peninsula: Taxonomy, Floristics, and

## Ethnobotany.

## 7. Yucatanensis Etnoflora: Psilotaceae of the Yucatan Peninsula.

**Nodulation and Nitrogen Fixation**

Legume Nodulation Reports not in Allen and Allen (1981)

Taxon	Status <sup>1</sup>	Nodule <sup>2</sup>	Source <sup>3</sup>
		Shape	
<i>Abarema adenophora</i> (Ducke) Barneby & Grimes	+		1
<i>Acacia multipinnata</i> Ducke	-		1
<i>Acacia paniculata</i> Willd. (= <i>A. tenuifolia</i> (L.) Willd. <sup>4</sup> )	-		1
<i>Acacia polyphylla</i> DC.	+		1
<i>Acosmium nitens</i> (Vogel) Yakovlev	-		1
<i>Albizia corymbosa</i> (L.C. Rich.) G.P. Lewis & P.E. Owen	+		1
<i>Albizia polyantha</i> (Sprengel) G.P. Lewis	+		1
<i>Albizia saman</i> (Jacq.) F. von Mueller	+		1
<i>Aldina latifolia</i> Spruce ex Benth.	-		1
<i>Aldina heterophylla</i> Spruce ex Benth.	-		1
<i>Amburana acreana</i> (Ducke) A.C. Smith	-		1
<i>Andira micrantha</i> Ducke	+ & -		1
<i>Andira parviflora</i> Ducke	-		1
<i>Andira unifoliolata</i> Ducke	-		1
<i>Apuleia molaris</i> Spruce ex Benth.	-		1
<i>Bauhinia acreana</i> Harms	-		1
<i>Bauhinia longicuspis</i> Benth.	-		1
<i>Bocoa viridiflora</i> (Ducke) Cowan	-		1
<i>Caesalpinia ferrea</i> Mart. ex Tul.	-		1
<i>Calliandra tenuiflora</i> Benth.	+ & -		1
<i>Campsandra comosa</i> Benth. var. <i>laurifolia</i> (Benth.) Cowan	+		1
<i>Cassia fastuosa</i> Willd. ex Benth.	-		1
<i>Cassia leiandra</i> Benth.	-		1
<i>Cedrelina cateniformis</i> Ducke	+		1
<i>Chamaecrista negrensis</i> (Irwin) Irwin & Barneby	+ & -		1
<i>Chamaecrista nictitans</i> (L.) Moench. subsp. <i>disadena</i> (Steud.) Irwin & Barneby	+		1
<i>Clathrotropis nitida</i> (Benth.) Harms	+		1
<i>Clitoria amazonum</i> Mart. ex Benth.	+		1
<i>Clitoria fairchildiana</i> Howard	+		1
<i>Clitoria javitensis</i> (Kunth) Benth.	+		1
<i>Clitoria pinnata</i> (Pers.) R.H. Smith & G.P. Lewis	-		1
<i>Copaifera multijuga</i> Hayne	-		1
<i>Copaifera reticulata</i> Ducke	-		1
<i>Crudia amazonica</i> Spruce ex Benth.	-		1
<i>Crudia pubescens</i> Spruce ex Benth.	-		1
<i>Cynometra bauhiniifolia</i> Benth.	-		1
<i>Dalbergia inundata</i> Benth.	+		1
<i>Dalbergia riedelii</i> (Radlk.) Sandw.	+		1
<i>Dalbergia riparia</i> (Mart.) Benth.	+		1
<i>Derris amazonica</i> Killip	+ & -		1
<i>Derris longifolia</i> Benth.	-		1
<i>Derris negrensis</i> Benth.	+		1
<i>Dialium guianense</i> (Aubl.) Sandw.	-		1

<i>Dicorynia paraensis</i> Benth.	+	1
<i>Dimorphandra caudata</i> Ducke	-	1
<i>Dimorphandra parviflora</i> Spruce ex Benth.	+ & -	1
<i>Dinizia excelsa</i> Ducke	-	1
<i>Dioclea macrocarpa</i> Huber	+	1
<i>Dioclea malacocarpa</i> Ducke	+	1
<i>Diplotropis purpurea</i> (Rich.) Amsh.	+	1
<i>Dipteryx magnifica</i> Ducke	-	1
<i>Dipteryx punctata</i> (Blake) Amsh.	-	1
<i>Elizabetha bicolor</i> Ducke	-	1
<i>Entada polyphylla</i> Benth.	+	1
<i>Enterolobium schomburgkii</i> Benth.	+	1
<i>Etaballia dubia</i> Rudd	+	1
<i>Heterostemon mimosoidea</i> Desf.	-	1
<i>Hymenaea parvifolia</i> Huber	-	1
<i>Hymenolobium heterocarpum</i> Ducke	+	1
<i>Hymenolobium modestum</i> Ducke	+ & -	1
<i>Hymenolobium petraeum</i> Ducke	-	1
<i>Hymenolobium sericeum</i> Ducke	-	1
<i>Inga acreana</i> Harms	+	1
<i>Inga calantha</i> Ducke	+	1
<i>Inga capitata</i> Desv.	+	1
<i>Inga cinnamomea</i> Spruce ex Benth.	+	1
<i>Inga disticha</i> Benth.	+	1
<i>Inga lateriflora</i> Miq.	+	1
<i>Inga macrophylla</i> Willd.	+ & -	1
<i>Inga meisneriana</i> Miq.	+	1
<i>Inga nobilis</i> Willd.	+	1
<i>Inga panurensis</i> Spruce ex Benth.	-	1
<i>Inga rubiginosa</i> (Rich.) DC.	+	1
<i>Inga speciosa</i> Spruce ex Benth.	-	1
<i>Inga thibaudiana</i> DC.	-	1
<i>Inga uraguensis</i> Hook. & Arn.	+	1
<i>Lecointea amazonica</i> Ducke	-	1
<i>Machaerium hoehneanum</i> Ducke	-	1
<i>Machaerium ferox</i> (Mart. ex Benth.) Ducke	+	1
<i>Machaerium froesii</i> Rudd	+	1
<i>Machaerium inundatum</i> (Mart. ex Benth.) Ducke	+	1
<i>Machaerium madeirensis</i> Pittier	+	1
<i>Machaerium quinata</i> (Aubl.) Sandw.	+	1
<i>Macrolobium acaciifolium</i> Benth.	-	1
<i>Macrolobium angustifolium</i> (Benth.) Cowan	-	1
<i>Macrolobium gracile</i> Spruce ex Benth.	-	1
<i>Macrolobium limbatum</i> Spruce ex Benth.	-	1
<i>Macrolobium microcalyx</i> Ducke	-	1
<i>Marmaroxylon racemosum</i> (Ducke) Killip (= <i>Pithecellobium racemosum</i> Ducke <sup>4</sup> )	-	1
<i>Mimosa spruceana</i> Benth.	-	1
<i>Monopteryx inpae</i> W. Rodr.	-	1
<i>Mora paraensis</i> Ducke	-	1
<i>Ormosia discolor</i> Spruce ex Benth.	+ & -	1
<i>Ormosia excelsa</i> Nemth.	+	1
<i>Ormosia macrocalyx</i> Ducke	+	1
<i>Ormosia paraensis</i> Ducke	-	1
<i>Ormosia smithii</i> Rudd	-	1

<i>Parkia decussata</i> Ducke	-	1
<i>Parkia discolor</i> Benth.	-	1
<i>Parkia multijuga</i> Benth.	-	1
<i>Parkia oppositifolia</i> Benth. (= <i>P. nitida</i> Miq. <sup>4)</sup>	-	1
<i>Parkia pectinata</i> (Kunth) Benth.	-	1
<i>Parkia ulei</i> (Harms) Kuhl.	-	1
<i>Peltogyne catingae</i> Ducke subsp. <i>glabra</i> (W. Rodr.) M.F. da Silva	-	1
<i>Peltogyne excelsa</i> Ducke	-	1
<i>Peltogyne paniculata</i> Benth.	-	1
<i>Peltogyne prancei</i> M.F. da Silva	-	1
<i>Pithecellobium adiantifolium</i> Benth.	+	1
<i>Pithecellobium arenarium</i> Ducke	+	1
<i>Pithecellobium auriculatum</i> Benth.	-	1
<i>Pithecellobium claviflorum</i> Benth.	-	1
<i>Pithecellobium duckei</i> Huber	-	1
<i>Pithecellobium lindesifolium</i> Spruce ex Benth.	+	1
<i>Pithecellobium pedicellare</i> (DC.) Benth.	+	1
<i>Pithecellobium sanguineum</i> Benth.	+	1
<i>Platymiscium duckei</i> Huber (= <i>P. trinitatis</i> Benth. <sup>4)</sup>	+ & -	1
<i>Pterocarpus amazonicus</i> Huber (= <i>P. santalinoides</i> DC. <sup>4)</sup>	-	1
<i>Schizolobium amazonicum</i> Hub. ex Ducke	-	1
<i>Sclerolobium chrysophyllum</i> Poepp. & Endl.	-	1
<i>Sclerolobium hypoleucum</i> Benth.	+	1
<i>Sclerolobium melanocarpum</i> Ducke	-	1
<i>Sclerolobium odoratissimum</i> Spruce ex Benth.	-	1
<i>Senna quinquangulata</i> (Rich.) Irwin & Barneby	-	1
<i>Senna silvestris</i> (Vel.) Irwin & Barneby	-	1
<i>Stryphnodendron guianense</i> (Aubl.) Benth.	+ & -	1
<i>Stryphnodendron microstachyum</i> Poepp. & Endl.	-	1
<i>Stryphnodendron pulcherrimum</i> (Willd.) Hochr.	+	1
<i>Swartzia auriculata</i> (Poepp.) Endl.	+	1
<i>Swartzia bannia</i> Sandw.	+	1
<i>Swartzia cuspidata</i> Benth.	-	1
<i>Swartzia ingifolia</i> Ducke	-	1
<i>Swartzia laevicarpa</i> Amsh.	+ & -	1
<i>Swartzia panacoco</i> (Aubl.) Cowan	-	1
<i>Swartzia polypylla</i> DC.	+	1
<i>Swartzia reticulata</i> Ducke	-	1
<i>Swartzia schomburgkii</i> Benth.	+	1
<i>Swartzia sericea</i> Vogel	-	1
<i>Swartzia ulei</i> Harms	-	1
<i>Tachigali paniculata</i> Aubl. var. <i>paniculata</i>	+	1
<i>Taralea oppositifolia</i> Aubl.	-	1
<i>Vatairea guianensis</i> Aubl.	-	1
<i>Vouacapoua pallidior</i> Ducke	+	1
<i>Zygia cauliflora</i> (Willd.) Killip	+	1
<i>Zygia glomerata</i> (DC.) Pittier (= <i>Pithecellobium glomerata</i> (DC.) Benth. <sup>4)</sup>	+	1
<i>Zygia inaequalis</i> (Humb. & Bonpl.) Pittier	+	1

<sup>1</sup>Status: +, root nodules reported as present; -, root nodules reported as absent; ±, the nodulation report conflicts with Allen and Allen (1981).

<sup>2</sup>Nodule shape: Ae, aeschynomeneoid; As, astragaloid (now referred to as caesalpinoid by Corby); Cr, crotalaroid; CrB, branched crotalaroid; CrS, simple crotalaroid; De, desmodioid; Gl, globose; Lu, lupinoid; Mu, mucunoid.

<sup>3</sup>Source:

1. Moreira, F.M. de S., FREITAS DA SILVA, and DE FARIA. 1992. Occurrence of nodulation in legume species in the Amazon region of Brazil. *New Phytologist* 121: 563-570.

<sup>4</sup> Name accepted in ILDIS database.

## Gleanings

ALBUQUERQUE's Ph.D. dissertation on identification and germination of Amazonian seeds, including many legumes, is now in press. He is now studying the identification and germination of weed seeds, again including many legumes, and is continuing to work with medicinal plants. He needs information about medicinal plants, and offers information about Amazonian Leguminosae.

ARAMBARRI is finishing a survey by SEM of testa topography in genus *Lotus*, subgenera *Acmispon*, *Edentolotus*, *Hosackia*, *Pedrosia*, and *Syrmatium*, and working on the comparative morphology of the lens of permeable and impermeable *L. tenuis*. She needs seed samples of *L. angustissimus*, *L. palustris*, *Prosopis nigra*, and *Spartium junceum*.

ARONSON is working on nitrogen fixation in and biogeography of *Acacia tortilis* subsp. *raddiana* north and south of the Sahara. He needs vouchered seed samples and rhizobial inoculants for *A. tortilis* and any other N<sub>2</sub>-fixing legumes from North Africa or the Sahel and offers similar materials from his research collection.

ASKEROV (New Reader) is working on the infraspecific systematics, taxonomy, distribution, and ecology of *Astragalus* in Azerbaidzhan and is preparing a checklist of Azerbaidzhan Leguminosae. She needs new publications on *Astragalus* and data on the types of *Astragalus* species and offers reprints of Fabaceae publications and herbarium specimens of Azerbaidzhan legumes.

BELYAEV (New Reader) is studying the infraspecific changeability and population structure of *Trifolium pratense* in the Ural Range. He needs herbarium specimens and seeds of *T. pratense* from different parts of its range and reprints on changeability, infraspecific systematics, geography, and morphogenesis. He offers herbarium specimens of *T. pratense* and other clover species from the Ural and Cisural Regions and seeds of *T. pratense* from native populations.

BANDYOPADHYAY (New Reader) is working on Indian *Bauhinia*.

BIANCO (New Reader) is working on the systematics of Caesalpinoideae of Córdoba, Argentina.

BOCHKIN (New Reader) is preparing a treatment of Fabaceae, excluding *Astragalus*, for the "Flora of Lower Volga." He needs legume taxonomic literature and herbarium specimens on exchange and offers herbarium specimens from Caucasus, Lower Volga Region, and Middle Asia, especially of the genus *Astragalus*.

BRIMER is working on the spreading potential of exotic *Acacia* species in Europe.

CHAPPILL is preparing a revision of *Jacksonia*, tribe Mirbelieae.

DEGALDO SALINAS, see SOUSA-PENA.

DILCHER is studying legumes in amber and needs fossil legumes.

FLORES GUIDO (New Reader) is working on the legumes as multiuse, renewable resources in the Mesoamerican tropics. He needs references on the taxonomy, floristics, and ethnobotany of legumes and offers reprints of his publications.

FORERO is now working on the *Calliandra* of Columbia.

GABAY (New Reader) is studying the systematics of *Lathyrus* species related to *L. sativus*, needs seeds of *L. amphicarpos*, *L. blepharicarpos*, *L. ciliolatus*, and *L. stenophyllus*, and offers seeds of *Lathyrus* section *Cicerula*, especially *L. sativus*.

GALETTA is studying nectar and nectaries, both floral and extrafloral, in *Acacia* in relation to plant biology.

GRAVES needs rhizobium of *Hedysarum spinosissimum*, *Medicago hypogea*, and *Vicia amphicarpa* (= *Vicia sativa* subsp. *amphicarpa*) and offers *Hedysarum*, California-naturalized *Medicago polymorpha*, *Trifolium hirtum*, and other annual species of *Trifolium* and *Medicago*.

HANELT, together with Dr. D. Mbewe of Zambia, is studying the storage protein types among a collection of *Phaseolus vulgaris* accessions from Georgia, Transcaucasus.

JAASKA is studying the biodiversity and phylogenetic systematics of the Triticeae and Phaseolinae using electrophoretic isoenzyme characters. He needs wild accessions of *Phaseolus* and *Vigna* and offers in exchange reprints of his publications.

JURZYATA is working on the chemotaxonomy and saponins of *Medicago*.

KAPULER (New Reader) is working on a phylogenetic garden layout (kinship/coevolutionary), formats for representing legume diversity in educational and conservatory gardens, and needs seeds representing all legume tribes and subtribes, primary genera. He offers access to his seed collection of Peace Seeds, A Planetary Gene-Pool Resource and Service, and his resources as Research Director of Seeds of Exchange, a national organic seed company.

KITE is doing chemotaxonomic studies of *Andira*, *Caesalpinia*, and *Inga*, needs bulk seed collections of these genera, and offers academic collaboration.

KRAMINA (New Reader) is working on the taxonomy of Russian *Lotus* and the variability and taxonomic structure of the *Lotus corniculatus* complex and needs seeds of native members of the *L. corniculatus* complex.

KRAUS (New Reader) is studying the inflorescence morphology of Caesalpinoideae and needs inflorescences of tribe Caesalpinieae.

LOCK has begun preparation, with Helen Ireland, of a legume checklist for the Indian Ocean Islands, including Madagascar, for ILDIS.

LUCKOW is studying the generic relationships in the Mimosaceae using morphological and molecular data, needs seeds of *Dichrostachys*, *Entada*, *Gagnebina*, *Mimozyganthus*, and *Xylia*, and offers seeds of various mimosoids, especially *Desmanthus*.

MAGULAEV (New Reader) is carrying out chromosome analyses of North Caucausian legumes. He needs information on the caryotaxonomy of legumes and seeds of the genera *Astragalus*, *Lathyrus*, *Medicago*, *Onobrychis*, *Trifolium*, and *Vicia* from other regions of the world and offers separates of his publications and herbarium specimens of investigated species.

MENONÇA is doing a comparative study of *Machaerium* section *Oblonga*, needs seeds of same, and offers specimens from the State of Minas Gerais, Brazil.

MOISEEV (New Reader) is preparing a thesis entitled "Systematics of section *Lupinaster* (Genus

*Trifolium*)" and has in press two articles, "Finds of *Trifolium sprygini* in Murmansk Regio" and "Analysis of morphological variety in *Trifolium lupinaster*, s.l., group." He needs seeds and herbarium specimens of *Trifolium* section *Lupinaster* and publications on legumes and offers herbarium specimens and seeds of Southern Ural legumes (Chelyabinsk Region).

MONTEIRO's graduate student, Flávia Garcia, has successfully defended her Master's thesis, a floristics survey of the legumes of a coastal forest in the northern area of the Atlantic Forest State Park of São Paulo, Brazil, listing 51 species of trees, shrubs, and herbs with diagnoses, illustrations, comments, phenology, and distribution. He is now supervising her Ph.D. project covering the taxonomic limits, breeding biology, and morphometry of the southeastern Brazilian forest species of *Inga*. T. Pennington, Royal Botanic Gardens, Kew, Great Britain, is a co-supervisor and will be providing funds for part of her research.

Poul Erik NIELSEN (New Reader) is working on hybridization of and field trials with *Pachyrhizus* in Tonga.

NIKOLAESKAYA (New Reader) is studying leaf anatomy of North Caucasus legume species, needs herbarium specimens and fixed foliar material of mountain legumes, and offers herbarium specimens and fixed foliar material of North Caucasian legumes.

NIYOMDHAM, according to VIDAL, is preparing the Dalbergieae for the *Flore du Cambodge-Laos-Vietnam*.

NOVIKOVA (New Reader) is working on the taxonomy of root nodule bacteria of temperate legumes and needs information and publications on legumes and rhizobia. She offers information on cross-nodulation and practical uses of new temperate legumes and rhizobia strains.

O'BRIEN (New Reader) has projects underway on the ecology and population biology of South Florida *Galactia* species and the population genetics of *Amorpha crenulata*. He needs taxonomic reprints on *Galactia* and offers materials from South Florida.

ORTIZ (New Reader) is working on the isoenzymatic and morphological characterization of *Arachis pintoi* and *Stylosanthes capitata*. She needs references on seed deterioration, conservation, and dormancy, and offers in exchange a wide range of tropical forage seeds in research quantities.

OSMAN is involved in agronomic studies of *Sesbania*, needs seeds of same, and offers seeds of various legume species.

Phan Ke Loc (HNU), according to VIDAL, is preparing the Millettieae for the *Flore du Cambodge-Laos-Vietnam*.

PLENNIK (New Reader) is working on the morphology, anatomy, and introduction of Siberian legumes, especially the genera *Astragalus*, *Hedysarum*, *Lathyrus*, *Lotus*, *Medicago*, *Melissitus* (= *Trigonella*), *Onobrychis*, *Oxytropis*, *Trifolium*, and *Vicia*. She wants seeds of native English and North American species of *Astragalus*, *Hedysarum*, and *Trifolium* and offers seeds, data on phenology, and publications on anatomy, morphology, chromosome numbers, and introduction of Siberian legumes.

POTOKINA (New Reader) is working on the taxonomy and geography of the genus *Vicia* and the polymorphism of native populations of *Vicia*. She needs herbarium material and seeds of Mediterranean *Vicia* species and offers seeds of *Cicer*, *Lathyrus*, and *Vicia* from Middle Asia.

ROSENTHAL needs seeds of *Lonchocarpus*, specifically *L. sericeus*, and is looking for a collaborator for further collecting of *Lonchocarpus*.

ROSKOV, SYTIN, and YAKOVLEV are continuing work on the database "Legumes of East Europe and North and Central Asia" for ILDIS, including Armenia, Azerbaijan, Belorussia, Estonia, Georgia, Kazakhstan, Kirgizstan, Latvia, Lithuania, Moldavia, Mongolia, Russia, Tadzhikistan, Turkmenistan, Ukraine, and Uzbekistan.

SCHNABEL (New Reader) is a postdoctoral fellow working on the cladistic biogeography of the genera *Gleditsia* and *Gymnocladus*, needs seeds from Asian members of these two genera, and offers seeds from North American members of these genera.

SCHULTZE-KRAFT is making chromosome counts of and studying species relationships in *Centrosema*, and needs viable seeds of *C. bracteosum*, *C. dasyanthum*, *C. heptaphyllum*, *C. jaraguaense*, and *C. tapirapoanense*.

SEFEROVA (New Reader) is studying the systematics of the genus *Cicer*, especially from Middle Asia and Caucasus, and of the infraspecific classification of cultivated *Cicer* and needs seeds of native *Cicer* species.

SEIGLER is working on the systematics of New World *Acacia* series *Vulgares*.

SHARIPOVA (New Reader) is preparing a key for Tadzhikistan legumes, needs publications, and offers the *Flora Tadzhikskoi SSR*, volumes 5 (Leguminosae), 6, 7, 9, and 10.

SOUSA-PENA (New Reader), with DEGALDO SALINAS and A. Wong, has submitted a manuscript entitled "Pollination dynamics and evolution in the *Phaseolus coccineus* L. complex" for the Proceedings of the Third International Legume Conference and is continuing his work on the pollination of the *P. coccineus* complex.

SYTIN, see ROSKOV.

TEPLYAKOVA (New Reader) is studying the infraspecific systematics of *Glycine max*, including cultivars.

VANDERBORGHT offers seed material of 150 taxa of Phaseoleae, mainly wild *Phaseolus* and *Vigna*, with detailed passport data and needs seeds of Phaseoleae.

VILELA (New Reader) is working on *Prosopis* leaf anatomy.

A. Wong, see SOUSA-PENA.

WHITE needs information about worldwide collections of leguminous crops and their wild relatives and offers a wide range of species.

YAKOVLEV, see ROSKOV.

## RECENT LEGUME LITERATURE

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## New Readers and Changes for the November 1992 Directory

The complete *Bean Bag Directory* now appears on a three-year schedule. The last full *Directory* appeared in November 1992, and the next complete *Directory* will be published in November 1995. Use this supplement in conjunction with the November 1992 *Directory*.

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